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Journal of the Society of Arts.

FRIDAY, JANUARY 5, 1854.

THE SMOKE NUISANCE.

During the week commencing January the 15th, and ending January 20th, there will be exhibited in the Society's rooms a collection of models, drawings, and diagrams of apparatus or inventions for suppressing the smoke nuisance. It is hoped that the collection will fairly represent the means by which this desirable end has been or may be attained. In each case a brief description of the invention, method, or plan, as well as of a list of the names of any places where it has been put in operation, has been asked for. Those who are intending to contribute to the collection should bear in mind that the models, drawings, descriptions, &c., should be sent in on or before Tuesday, the 9th of January.

On the evening of Wednesday, the 17th of January, Mr. George Muir, of Glasgow, will read a paper before the Society, "On the Smoke Nuisance; considered Morally, Historically, Scientifically, and Practically," when Mr. W. Fairbairn, F.R.S., will preside.

FLAX, AND ITS PRODUCTS, IN IRELAND.

Contributed by Wm. Charley, Seymour-Hill, Belfast.

LETTER X.

Before proceeding to discuss the details of flax cultivation in the field, I think it judicious again to refer to the question of *profits*. I wish, in addition to my own experience, and some of my neighbours, to give the testimony of other respectable parties residing in different counties of Ulster, I am anxious to do this because my object is to furnish *bona fide* statements, without either depression or exaggeration.

My calculation is that on my own farm, the cost of an acre of flax is £9 15s. 10d. This sum may be classified thus:—

	£	s.	d.
For Horse-work	2	9	5
,, Manual do.	2	7	3
,, Seed	1	5	0
,, Scutching fibre	1	14	2
,, Rent and taxes	2	0	0
Total . . .	£9	15	10

The minute particulars of these were given in my last letter.

This cost will be reduced a little on a larger quantity of flax, as the horse and manual work on such a small field or lot of any crop exceeds in proportion the cost of 5 or 10 acres. We may, therefore, estimate the average cost from £9 to £9 15s. 0d. per statute acre. For the past three years, the average of my produce per acre in fibre, is 29½ to 30 stones, worth about 8s. a stone, and, in addition to this, the flax-bolls are worth from £1 to £3. The difficulty regarding taking off the flax-bolls in the field is this: if rippled off closely, the teeth of the instrument split and injure the tops of the fibres, and the buyers not only object to this, but deduct considerably from the price they offer in consequence. It is, therefore, a matter of calculation, whether it be wiser to take off 30 bushels, worth £1, leaving the *fibre uninjured*, or to take off the entire, say 90 bushels, worth £3, and accept a lower price for the fibre. For a crop of strong, coarse flax I would adopt the latter system, and where a fine and valuable fibre was expected, the former—for in this case the high price likely to be obtained for the fibre, if well turned out of hand, would more than compensate for the loss of part of the seed.

My statement, already published, shows a profit of £3 0s. 2d.; this I consider only an *ordinary* result, which has been frequently exceeded in good seasons. A middling soil and an unfavourable year have, however, occasionally left me no profit at all, but every crop, as well as flax, is subject to those variations. I now wish to form an average of profit from the three estimates given in my last; 20s. an acre, however, must first be added to Mr. Coates' statement, the rent of his ground close to Belfast being charged much above an *agricultural* rent; in fact a portion of this farm is now let at a very high rate, for building villas on.

The computation of profits will then stand as follows:

	£	s.	d.	
Mr. Charley . . .	3	0	2	per acre.
Mr. Hunter . . .	5	6	7	do.
Mr. Coates . . .	4	1	8	do.
Divide by 3 .	12	8	5	
Average .	£4	2	9	per acre

Now I have recently had an opportunity of seeing, at the office of the Royal Flax Improvement Society, a statement furnished by the secretaries of several farming associations in Ulster on the subject of average flax crops in their respective districts; also a calculation of the profits realised by a large number of farmers about Newry, prepared by an extensive purchaser of fibre in that neighbourhood. These authorities estimate the average profit at £7 the Irish acre, equal to £4 6s. the English or statute acre. The average of my three statements being £4 2s. 9d. is a proof that my calculations are pretty correct, though limited in extent to the crops in the valley of the Lagan. The profit on flax is a fairer way to estimate the crop than by yield in weight or bulk, because a small crop of very fine flax may be as remunerative to the farmer as a large quantity of coarse, low-priced fibre. The average yield in Ulster is, I believe, from 30 to 35 stones of 16lbs. each—the average of my three statements, I find, is 31⅓, again agreeing very closely.

Besides these explanations regarding *ordinary* and *average* crops, it may be interesting to give an account of some *extraordinary* crops, showing a result so satisfactory and astonishing, that, were it possible to gain so high an average, I think every agriculturist in Great Britain and Ireland would plunge at once into the mysteries of flax cultivation.

Mr. William Blakeley, a tenant of the Dean of Dromore, in the townland of Corcelany, near Waringstown, co. Down, grew, some years ago, three statute acres of flax. The produce of the field was purchased for 15s. a stone by Messrs. McMurray and Henning, of Waringstown, the eminent cambric manufacturers, who stated it was equal, if not superior, to any flax they ever saw before, and that they had given 36s. a stone for foreign flax of inferior quality. The entire produce of the three acres was fully 100 stones, which, at 15s., would be £75, or, per acre, £25, leaving a profit, therefore, of from £15 to £16 per statute acre!

John Birney, Esq., of Lisburn, co. Antrim, in a speech made in 1852, stated that he knew a small field belonging to Mr. Lucas Waring, of Lisburn, consisting of three roods, English measure, which grew potatoes one year, corn the next, and flax in 1852. The value of this flax amounted to £14, equal to nearly £19 per statute acre, which, deducting expenses, would leave between £9 and £10 clear profit per acre.

My neighbour, Mr. James Hunter, has this year a very large yield of flax off rather an unpromising soil. He reckons the produce of 6½ acres in fibre to be 280 stones,* worth 9s. a stone, besides some bolls saved for feeding, worth £1 an acre. These together would give for the entire value of the crop, £132 10s., or £20 7s. per acre, and deducting expenses, the profit would be from £10 to £11 per acre.

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* The stone of flax is 16lbs., or 7 in the cwt. of 112 lbs.

On my own farm the highest profit I have made by flax during the last ten years was between £5 and £6 per acre, but I look forward with hope to be fortunate enough some favourable year, to obtain an extraordinary crop, and to realise a very large profit, like the parties whose pleasing successes I have just described.

Let us now return to the consideration of the soil, the quality of which, as was stated in my last letter, should be a nice loam, or medium weight, with a strong subsoil. With great care, however, a fair crop may be had on other soils not so well adapted for the purpose. The treatment of the soil should depend on its quality; the object to be attained is the production of a *fine, deep, dry, and clean bed* for the flax seed. Any skilful agriculturist would know the best means of gaining these points, but to repeat the plans generally adopted in this country may be of some service. These may be classified for the three kinds of soil; light, medium, and heavy. With respect to the first, namely, light soils, it is considered best to plough the wheat stubble in February, or early in March, so as to get a little of the frost. In April it should be well harrowed and picked clean of any weeds, then sown with flax seed at the rate of a Riga barrel, or three-and-a-half bushels, the Irish acre, that is, fully two bushels per English or statute acre, indeed, two-and-a-half are often used. The ground should be made as even and flat as possible, to ensure uniformity of length in the stems of the plant when at maturity. After the seed is sown, which should be done up and down the rig, not across, a fine seed harrow and a light roller should be passed over the field, to cover the seed and finish the plot; the seed should be about one inch below the surface of the ground. It is considered advisable to sow rather a *full* quantity, except when intended to sow the seed for reproduction; the greater the number of stems, of course the yield of fibre will be increased in proportion. When put in sparingly the seeds produce stronger plants, having great branching tops, loaded with bolls (or seed capsules), but the quality of the fibre is generally deteriorated and always coarser. Depth of tillage in flax cultivation is of more importance than many people imagine. In sustaining so tall a stem, and providing the different peculiar ingredients from the soil so necessary for its well-being and growth, the roots have a laborious office to perform, and they penetrate very deeply, if allowed, in search of the required nourishment; if checked, the prosperity of the plant will be much impaired. Undrained land is quite unsuited to flax, and so are coarse, poor soils. Depth and fineness of quality, freedom from weeds or poverty, dryness and evenness of surface, are the true characteristics of a good flax-producing soil; when any of these are wanting, the whole affair is a speculation of an indifferent kind.

As to soils of a medium class, the same treatment will do on good well-situated fields as I have just described for lighter ones, but if not very well conditioned, it will be judicious to plough the wheat stubble in autumn rather deeply. Should the land be at all damp, or subject to annoyance from surface water, a common case on the heavier kinds of clayey loam, the ridges should be made *high* in the *centre*, and the furrows dug and shovelled up, to carry off the water freely, thus preventing "sourness" from excessive moisture during the winter months;—in the spring cross-ploughing and plenty of harrowing to level and make the soil friable and free from lumps; the rest of the treatment will be the same as that already given for light soils.

The heavy soils are now to be considered. Those moderately so will do very well with the two ploughings, &c., recommended for the heavier kinds of medium loamy soils. In very stiff or clay soils, a second additional ploughing in spring is desirable, but as a general rule, a wise farmer will avoid trying flax on such soils, the chances of success not being in his favour. When the experiment is to be made, however, the subsequent treatment will resemble that given for the heavy medium soils, more frequent harrowings and rolling will likely be required to subdue the clods and bring the ground to the required smoothness and delicacy.

With respect to SEED, the very best and purest should always be procured; it is false economy and miserable management, to run any risk by purchasing *job lots* of seed, and, for the sake of a *present* saving of a *few shillings*, to endanger the eventual loss of as *many pounds*. In some of my previous letters on "The History of Flax and its Products in Ireland," I have shown the prevalence of roguery among flax-seed dealers in former years; it strikes me, however, though the farmers are much to be pitied when deceived in this way, not only for the sake of their own pockets, but from the "heavy blow and great discouragement" given to flax cultivation by the use of bad seed followed by bad crops, they themselves are not free from blame; the excessive hankering after *lowness of price* they too often exhibit creates a class of salesmen to satisfy that demand; the article is produced at low enough rates, but as to good quality, of course, that could not be given; and the poor farmer blames his field, or the season, for a failure that most likely was caused by his own "hard bargain." This remark applies particularly to the class of small farmers, with very limited means. It is not meant to include those clever, clear-headed agriculturists, with good-sized farms and proper capital, joined with a fair amount of education, so many of whom, happily for this country, are now occupying the land, and making "two blades of corn grow where one grew before." Such men are too "wide awake" to fall into this error—they see in the papers the ruling prices for good seed, and they know the importers they can depend on for a genuine supply.

After the flax has been placed carefully in the earth, as directed, it must be attended and watched, to prevent the weeds gaining the mastery, and injuring the crop. In clean, well-conditioned land, few weeds will appear, but all such incumbrances must be removed when the plant is about five or six inches high—if taken too soon a second operation may be required, and if too late the plants will be injured by the weeders, and will not recover their correct position. The weeders should have a cloth or straw mat under their knees, and press always the stems *one way;* if twisted, the plants cannot rise again, and will be lost in consequence.

It is desirable as much as possible, to make the weeders work with their faces *towards the wind*, so that when they pass on, the plant may have the assistance of the breeze in regaining its upright position.

We will now imagine the crop in full growth, rapidly approaching maturity; the field in the distance appears a mass of soft and elegant green, undulating in long waves under the pressure of the passing gale, approach nearer and see every gentle stem in that dense mass crowned with bright blue flowers, of most delicate texture; small, but beautifully formed in every part, and very, very pleasing to the eye. At this stage there is no crop the agriculturist produces that can equal flax for attractive and ornamental aspect; in a few weeks, however, the field becomes changed, and instead of the handsome flowers, rough-cased globules, full of seed, appear.—In this mature condition let us leave the plant for the present.

Home Correspondence.

ADULTERATION OF WARES.

SIR,—The inspection of wares by public officers, which "Nemo" wishes to provide, might easily be effected by putting into force the powers of the City companies,—one special object of their incorporation being to create machinery for suppressing the manufacture and sale of deceitful wares. The perversion of their purposes to the gratification of individuals who are quite unconnected with the trades they affect to govern need be no reason for the gradual decay of these incorporated bodies, when such really healthful duties are required at their hands. The extract below from the statute 3, Henry VIII., cap. 14, similar to the general powers confided to other companies, explains what I have said :—"The Lord Mayor of London, and the masters and wardens of the tallow-chandlers' company have power to search all oils brought to London to be sold, and to oversee that the same be not mixed or altered by oilmen from their right kinds, and what they shall find mixed deceitfully they are to cart away; and punish the offenders by imprisonment or otherwise, at their discretion, according to the laws and customs of the city."

X.

THE F.S.A. QUESTION.

Sir,—I see, from the "Athenæum," that the Council of the Society of Antiquaries have determined to endeavour to stop the practice of persons using the initials of fellowship with that society without the necessary qualification of being fellows.

I think it a very necessary determination on their part, being aware of several persons using those initials without possessing the requisite qualification, and of several members of the Society of Arts being dubbed "F.S.A." by well-meaning persons, of a flattering disposition, but who, very likely, know no better than that "F.S.A." means *Fellow* of the Society of Arts. If you refer to the list of subscribers to the "Newton Testimonial" you will find many members of the Society of Arts with the appendage "F.S.A." to their names, placed there not by members of the Society of Arts, but by the promoters of that testimonial.

But why members of the Society of Arts should not have an equal standing with those of the Antiquaries, or any other Society, except the Royal, is a matter of surprise to me. The Antiquarian is not by any means to be compared with it in usefulness and numbers, as well as of the eminence of its members in other respects; neither does any other Society surpass it in the power and the will, and the results of its labours, nor has any Society more influence on any important movement.

On these grounds I think the Society of Arts should confer honour on any person who may be elected a member, and, indeed, I think it does so; but, if Fellows of inferior Societies can stickle upon the assumption of initial letters, I do not see that that honour, if any, should be confined to them; but that those of the Society of Arts should also look to their position, and assume "F.A.S." I think they ought to have a position as high as any other society's members, and that they are certainly entitled to "F.S.A.," or "F.A.S." The latter seems more reasonable than the former for the Society of Antiquarians, and the former for the Society of Arts.

As a member I shall be very glad if you insert this in the Journal, so that others may consider the subject, and give expression to their views.

I am, sir, yours very truly,
W. H.

Blackburn, Jan. 1, 1855.

INDUSTRIAL PATHOLOGY.

The Flax Dressers' Trade.

Sir,—My attention has been specially directed to an article in No. 48 of *Chambers's Edinburgh Journal*, of 2nd December, entitled "Industrial Pathology," in which I was much gratified to find that the pernicious effects resulting to health from the prosecution of certain trades and professions, had in many instances been counteracted by the adoption of very simple means; it also stated that the body to which you belong, had, with praiseworthy zeal, taken a warm interest in the matter, and was anxious to correspond with working men whose trades or professions were injurious to health, with a view, if possible, to devise some means for removing the cause. I have therefore taken the liberty to address you, sir, as an individual belonging to a class of hardworking men, whose occupation exercises, in many cases, a most baneful influence on their health, and I am afraid on their morals, so much so, that a man when he ought to be at his best, if left to his own exertions, either meets a premature grave, or sinks into the unenviable condition of a pauper. The trade I allude to is Flax dressing; for although hand-labour is in a great measure superseded by machinery, still there are many persons, both here and elsewhere, obtaining a livelihood by it, and will likely continue to do so unless some further improvements take place in the machinery intended to supersede us. With your permission, sir, I will now proceed to give you a short detail of the disadvantages and consequent injury to health we have to contend with in the prosecution of our calling. And, sir, the great evil is dust, or what we call in Scotland, "stour." There are some minor ones, but that is the one great evil, and if we could get rid of that, the trade would be comparatively healthy. The labour we perform is severe; and surrounded by an atmosphere of dense decayed vegetable matter, coming from the flax in the process of dressing, in the shape of dust, which, entering our lungs, produces the distressing results I have described, which results have been mourned over when too late since ever I remember, but no remedy, so far as I know, has ever been sought; in fact it has just been looked upon as a thing that could not be helped. Now, sir, if fortunately you are the means of ameliorating our condition by the discovery of a remedy, you will receive the heartfelt blessings of a class of hard-working men, and you will have the satisfaction of knowing that you have materially advanced the happiness and comfort of a considerable portion of your fellow-creatures; and trusting to hear from you soon, I am,

Yours, &c.,
JOHN SMART.

Dundee, December 26th, 1854.

MR. P. L. SIMMONDS ON THE BRITISH COLONIAL CONTRIBUTIONS TO THE PARIS INDUSTRIAL EXHIBITION.

Sir,—The Society of Arts having been mainly instrumental in originating and bringing to a successful issue that important Industrial Exhibition of 1851, which has been attended with such beneficial results to the commerce of our country and her foreign possessions, it will, I am sure, be interesting to its members to know what steps are taking to represent the productions and manufactures of our Colonies at the Paris Exhibition to be held in the spring of 1855. As the pebble cast in the water throws out widely-extended concentric circles, so the example set by Great Britain of collecting from all parts various products of industry for examination and reward, has been extensively followed, and every country seems to be imitating the laudable example. To mention but a few, I may instance Dublin, New York, Montreal, Quebec, Toronto, Halifax, Nova Scotia, St. John, New Brunswick, Antigua, Chili, Venezuela, Batavia, and a variety of other places whose exhibitions of produce and manufactures have been held with more or less success, and have certainly contributed to stimulate industry and invention, and to draw forth from obscurity many hitherto unregarded products and materials.

I proceed to summarize, for general information, from my private advices and the Colonial journals, what has already been done, what exertions are making to represent British Colonial industry and the produce of our dependencies in different quarters.

Canada is striving to maintain at Paris that honourable position she acquired for her varied and well-arranged collection of produce and manufactures shown in Hyde-park. An executive and numerous local committees have been formed, to whom is deputed the task of selecting and arranging the contributions, and rewarding the most deserving exhibitors. Attention is prominently directed to the honorable mention which was made of the Canadian collection by M. Dufresnoy, in the Report of the Jurors, Class I., by Dr. Hooker in the Jurors' Report, Class III., &c. A detailed list of the rewarded exhibitors at London and New York, and in the local Shows, is published, occupying very many columns of the provincial journals, and attention is specially pointed to the class of products requiring illustration, and for which Canada might expect to stand most prominent.

In JAMAICA the Governor has resuscitated the Society of Arts, established at Kingston in 1852 by Sir C. E. Grey, and announced to the members the desire of the government that articles illustrative of the resources of Jamaica should be sent in before the 1st of March for transmission to Paris. Special committees were appointed to collect specimens exemplifying the following branches:

1st.—On the Cultivation, Produce, and Preparation of the Principal Articles of Export from the Island.

2nd.—Timber Trees and Ornamental Woods.

3rd.—Irrigation and Hydraulic Engineering, Aqueducts, Reservoirs, &c.

4th.—The Minerals of Jamaica, and the latest Improvements in Metallurgy.

5th.—The Medicinal Waters, Plants, Gums, Oils, and other Medicinal Productions of Jamaica.

6th. The Manufactures, Handicrafts, and Trades of the inhabitants.

7th.—The Vegetable Productions of the Island, which, not having hitherto been Articles of Export, or of Internal Trade, are supposed to be fitted to become so.

8th.—The Breeding and Rearing of Stock (Large and Small).

His Excellency in his opening speech to the Legislature, thus alluded to commercial products:—

" Much attention has lately been turned at home,—in consequence of the scarcity of the ordinary materials for paper-making, and the anticipated effects of the war with Russia, on the supply of hemp and flax to the fibrous products of the tropics.

" The plantain from the original type of which the Manilla hemp of commerce has long been manufactured —is regarded as peculiarly adapted for each of the objects in view; and as it is grown in our gardens for the sake of its nutritious fruit, this novel use for its now refuse stem promises to be of much importance. Again, various species of the aloe and the pine apple tribes producing fibres admirably suited for textile purposes, are found wild all over the island, and no doubt among the luxuriant vegetation of our plains and mountains, there are plants of other families equally capable of such application.

" Patents for the manufacture of paper and the preparation of fibre have been taken out in Great Britain, and I have every reason to expect that one or more Companies will shortly commence operations among us on an extensive scale.

" It is however to the possible effects of such a movement upon the industry of the innumerable small freeholders scattered throughout the country, often at too great a distance from the remaining sugar or coffee plantations to work for wages,—that I attach the greatest importance; for, if by the aid of a simple hand-machine, already invented, they could prepare hanks of fibre for market from their plantain trees, or set their children, in default of other employment, to extract it from the leaves of the penguin which fences in their grounds, it would prove one of the greatest blessings that could be vouchsafed to this island.

" Our local Society of Arts has not been idle on the point, as it is preparing to avail itself of the opportunity for displaying the varied resources of Jamaica presented by the forthcoming universal Exhibition at Paris.—As this colony has been specially invited to contribute to that exhibition, as you will learn from a Circular Despatch from the Secretary of State to be laid before you, I trust you will be disposed to support so praiseworthy an effort."

Among other contributions to be transmitted, I may refer to a collection of 51 specimens of prepared fibres sent by Mr. Wilson, the curator of the Bath gardens, for exhibition at Paris in 1855. These beautiful fibres were to be exhibited for a limited period at the rooms of the Chamber of Commerce, in Kingston. Many other samples are produced, as also samples of paper made in England from short fibres forwarded from the island.

Mr. E. C. Lewis exhibited specimens of stone found in the parish of St. George, fully equal to the finest stone used in lithography, and for hones; and the Society had authorised him to procure a large slab to be forwarded to the Paris Exhibition.

Mr. Henry Kemble exhibited a sample of oil extracted from the seeds of the marenga, and made an interesting statement in connection therewith. He was requested to prepare a communication to be published in the Transactions of the Society.

The Hon. Mr. Chitty produced a sample of citric acid prepared by Mr. Charles Grant, chemist, of Kingston.

A sample of Texas millet, grown by the Rev. Thomas Wharton, of Bath, was produced by the Secretary, having been forwarded by him for distribution. A paper was read by Mr. Richard Hill, explanatory of the cultivation and produce of this remarkable grain. It is amazingly prolific, and seems well adapted as a mountain corn. Mr. Hill's communication was directed to be published in the transactions of the Society.

I could extend this list over a large portion of your columns, but may notice seven specimens of the hard woods of the island, collected by Mr. Berry from the north side, and which have been planed on one side, and polished. These woods will form a conspicuous portion of the contributions to be sent from this island to the Paris Exhibition. When the collection is complete, it will extend to forty specimens.

Reports from some committees were read, detailing their transactions; and it is now beyond doubt that the Society will send to the Paris Exhibition such a collection of the products of the country as will present no mean appearance; and it is hoped that many articles of commercial importance will thus be brought prominently into notice.

With respect to island manufactures they are few in number, at least of such as would interest or excite the novelty of the Parisians, but from my own local experience of several years residence in Jamaica, I know that a most valuable collection of various woods, of the ordinary staples of commerce, and of the minor products of the soil, might be sent. Jamaica was disgracefully represented in 1851 at Hyde-park, and should make an effort to collect a fair display from her abundance of drugs, gums, oils, fibres, fruits, spices, and other vegetable productions.

There exists in the West Indies a large amount of undeveloped resources besides those to which I recently directed attention in the paper read before the Society of Arts, which would afford remunerative occupation to the industrious poor, resulting in the production of superior articles, not only of a more durable description, but at a lower price than is at present charged on imported articles. Of this fact, well-informed parties in Antigua, Grenada, St. Kitts, St. Vincent, and other islands, have recently become aware. Amongst the articles most in demand, and which would at all times meet with a ready sale, the following may be enumerated:—Cabinet work of all kinds; Tortoise shell work; Rope, Cordage, and all kinds of prepared fibrous substances; Pottery of every description; Leather, dried and salted hides; Saddlery and harness; Boots and shoes; Baskets and wicker work; Plain and ornamental needlework; Hats of Panama and other kinds of straw, and plaited straw; Door, Table, and other mats; Bird Cages; Engineering and working models; Machinery; Brass, Copper, and Tin work; Whitesmiths' and Blacksmiths' work; Textile fabrics; Paintings and drawings; Carpenters' and Wheelwrights' and Coopers' work, and all kinds of mechanical work and inventions; Tobacco, Cigars, and Snuff; Stuffed and preserved animals, birds, insects, and fish; Staple products, including sugar, rum, unfermenting molasses, arrowroot, tous-les-mois, potato flour, manioc farina* and tapioca, cassareep, ginger, cayenne pepper, curry powder, pickles, all kinds of native succades, cotton, fruits and vegetables of every kind, dried fish, preserved shell fish, honey and bleached wax, oils, animal and vegetable, temper lime, native artificial manures, fossils, cut and polished, and in the natural state, shells, &c., cabinet woods, building materials, &c., &c.

But no description of work exhibiting skill or industry, whether useful or ornamental, ought to be excluded, while a preference should be given to articles of utility, and such as are in daily use.

In the production of the above articles much local industry may be beneficially exercised; besides which many others will suggest themselves to practical minds.

THE FOLLOWING IS A LIST OF THE WOODS AND STONE OF THE BAHAMA ISLANDS INTENDED FOR THE FRENCH INDUSTRIAL EXHIBITION.

Name.	Principal Islands on which Produced.	Average Size.	General Price.
1 Native Pine	New Providence	50 × 12 × 10	2d. per foot sup.
2 Yellow Wood	Throughout the Colony	6 × 5 × 4	£1 5s. to £2 per ton
3 Madeira Mahogany	Andros Island	14 × 8 × 8	£1 14s. to £2 10s. ꝑ 100ft. sp.
4 Horseflesh ditto	Do.	12 × 9 × 8	5d. per foot sup.
5 Cedar	Generally	12 × 9 × 8	4½d. do.
6 Young Lignumvitæ	Long Island	3 × 7 diameter	50s. per ton
7 Dogwood	G. Bahamas & Andros Island	3 × 6 do.	1s. to 1s. 3d. each
8 Prince Wood	Andros Island	8 × 5 × 4	£6 5s. per ton
9 Green Ebony	Exuma and Long Island	6 × 4 diameter	£6 0s. do.
10 Crab wood	Generally	5 to 6 × do.	£6 5s. do.
11 Stopper	Do.	8 × 4 do.	2s. 6d. each
12 Brazilletto	Do.	5 × 2 do.	£5 5s. per ton
13 Native Stone	Do.	Any Scantling	30s. per 100 feet cubic
14 Large Lignumvitæ	Long Island	3 × 8 to 9 diameter	60s. per ton

Turning now to the East, I find that in Ceylon, Messrs. Wilson and Co. have prepared various specimens of cocoa-nut oil and soap manufactured from oil which really do credit to Ceylon as a manufacturing country. The finest specimen of the oil is from the plantation cocoa-nut, and is as clear and bright as the purest water. That manufactured from the copperah prepared by the natives contrasts most unfavourably as regards colour and clearness. The specimens of yellow and white soap are excellent, the latter description, scented with almonds, is as white as paper. The toilet soap is very nicely prepared, and will, no doubt, soon become a great favourite with the Parisians. Messrs. Wilson and Co. also forward a very valuable collection of medicinal oils, the strength of which will doubtless surprise the "faculty" at Paris, used as they are to the various herbal preparations of the Pyrenees.

Coffee, cinnamon, and cocoa-nut oil are represented by excellent specimens of each variety. The modes of preparation of coffee and oil are shown by models of a "peeler," and a "checko," with figures of the bullocks at work; while the process of operation in changing the cinnamon plant into the marketable article is illustrated by calotypes.

Specimens of every variety of coir rope and matting, and of the different sorts of fibres used in their manufacture, have been furnished by several exhibitors native and European.

A curious box, containing everything that the cocoa-nut palm produces, from the nut in its husk, husk and nut separated, husk beaten out into coir, from which string, rope, and matting are made, samples of which are also shown; the nut converted by different operations, first into copperah the dried kernel, then into the cocoa-nut oil of commerce, while the refuse or poonac, used for feeding cattle and pigs, and for manuring purposes, is there also. From the juice of the spathe is made arrack, vinegar, jaggery, and sugar; specimens of which are also to be found in the collection, while in other parts the carved shell of the nut is converted into a beautiful ornament, and uncarved with a handle, made of cocoa-nut *wood*, is found the spoon in common use among the natives. There is also a model of the still used in the preparation of arrack.

A great variety of medicinal oils, gums, plants, and seeds is also shown, and a valuable collection of the timber and ornamental woods of the colony is forwarded.

Passing on to the models, which will be found to possess much interest, every variety of native boat in use in Ceylon will be represented, while the models of agricultural implements are perfect; the plough with two buffaloes at work is an excellent specimen of native art. There are many models of religious buildings, from the simple *dagoba*, to the plan of the great Calany Wihare; in one among them the perfect repose always noticeable in the reclining figures of Budhoo is admirably preserved. Next in order are the wax models of the fruits of the island, and on the same table, together with ivory images, bottles, and knife-handles, is a box containing specimens of all the Ceylon precious stones, cut and uncut. There is another and a larger box with all the varieties of common stones, earths, and rocks. Of furniture there is a good but not a large assortment: a pair of richly-carved ebony couches, and a sofa table, and two chairs of tamarind wood being the principal objects of attraction. But the interest attaching to everything else exhibited dwindles into insignificance in comparison with the box of fibres, the manufacture of the Colpetty Industrial School. Fibres the produce of the plantain—of the varieties of aloe, of the pine-apple and other plants are here shown, with several silks. The fibre from the plantain is as long and as fine as Manilla hemp—while that from the pine-apple is as fine as silk. In connection with these products I may append some extracts from the annual report of the inspector, the Rev. J. Thurston, presented to the Island School Commission in November, which are exceedingly instructive and interesting:—

"In 1851 he commenced the growth and preparation of *Arrowroot*. During that year only *fifty-six pounds* of this useful article were made; but so great have been the demands for it, and the improvements introduced into the preparation of it, that it is now an article of daily sale to the extent of nearly 150 *pounds a month*, a considerable portion of which, it is pleasing to know, is sold to natives in small quantities, thus adding to their scanty comforts in time of sickness. Another point worthy of notice is this, that whereas for the first two years all the arrowroot was grown in the Industrial Garden itself, it is now supplied from the gardens of natives even of distant villages, who have been induced to commence the cultivation of it by the certain return which they perceived it would produce.

"The next object to which the attention of the boys was turned was *tat making* ; a few were made at first, by way of experiment, of the central rib of cocoa-nut leaflets strongly tied together, but quite plain, and were used as blinds in the windows of a chapel erected by Mr. Thurston on the mission premises adjoining the Industrial Garden. These attracted the observation of several gentlemen who were present at the opening of the chapel, and the result was a succession of orders for several of the same material. They are now made of split *batalies*, and the string is worked on them in patterns of various kinds. Three or four of very pretty design were shown at the late exhibition of the Agri-Horticultural Society, and were considered deserving of an extra prize. They have also led to an increase in the orders for these useful and ornamental articles to the extent of a thousand square feet. It may be mentioned as a feature connected with the working of this branch of the Institution, that whereas at the first Mr. Thurston had to draw the patterns himself, and even to show the boys how to tie the fibres together, the boys now vie with each other in submitting patterns for selection by Mr. Thurston, and several of them are quite capable of instructing others in the whole process of the manufacture.

"Another very interesting occupation of the boys is *the rearing of silk-worms*, which was commenced last year at the suggestion of the Government agent of this province, who kindly supplied the first stock of eggs, about thirty in number. These have increased almost beyond the limits of calculation, and by crossing the moths with another kind received from Malta, silk of a very rich colour has been produced. Several skeins of this formed an interesting object at the Exhibition above referred to, and gained one of the highest prizes. Several orders for eggs have since been received by Mr. Thurston from gentlemen resident in the country who happen to have their natural food, the mulberry tree, growing on their estates. Any person who attempts to rear them will do well to profit by Mr. Thurston's experience, that it is necessary to protect them from birds and winged insects, as well as from ants, and that damp food produces a fatal disease.

"The preparation of *fibres of various kinds* has for some time been vigorously prosecuted; so that in addition to the coir fibres, which gained a prize at the late Exhibition, there were others prepared from plantain stems, the leaves of the pine-apple, the two common large aloes, *dool* and *inyanda* (an indigenous plant growing in great abundance in many parts of this and other provinces) which also gained a prize. Specimens of these have been sent to England for report, and others are being prepared for the approaching Exhibition in France. Judging from the rope and twine already prepared from these fibres, and from the bark of some trees, it seems not at all improbable that owing to the present scarcity of hemp and flax, Mr. Thurston's efforts may eventually lead to a considerable increase in the exports of the colony.

"Gums and resins of various kinds have been collected, some of which, it is thought, may possibly compete with caoutchouc and gutta percha.

"Sago and Tapioca, apparently of a much better quality than much that is imported, and Cassava flour, have lately been prepared. With reference to tapioca it is interesting to observe, that whereas the natives have hitherto regarded the Manioc as a poisonous shrub, from the fatal effects produced upon their pigs by nightly surfeits on its roots, they will now be able to sell them to considerable advantage, and thus derive benefit from that which, although growing around them in great abundance, has hitherto been rather a source of annoyance than otherwise.

"*Baskets*, similar to those hitherto known as Caltura baskets, have lately been made from the leaves of the date-palm, and it is intended to extend their use to the *manufacture of hats.*

"*Rattan mats* are about to be prepared ; some of the boys have prevailed on their relations to cut rattans and bring them for sale.

"Mr. Thurston thinks that many other articles, as for instance, *mustard, castor oil, tobacco, &c.*, may be produced in the island, quite equal to what is imported; and as time and opportunity serve, his attention will be directed to their cultivation."

The best collection made has been shipped home from BOMBAY. Every imaginable species of manufactured goods from every district under the Presidency, we are told, has been collected together in rich and varied abundance. The cabinet black-wood work of Bombay, and its ivory stands and work-boxes are of a particularly chaste and elegant description. The manufacture in Bombay stones is also good, the chief article thus manufactured being, the model of a gun, mounted on a platform, with the limber attached. There are several models of Hindoo temples, the largest, which is in ivory, being a representation of a building at Koltapoor. The collection of articles of wearing apparel is peculiarly rich, the gold embroidered cloths of Ahmedabad taking the lead in this department. A velvet saddle-cloth used by Indian princes for led horses, superbly embroidered in gold, and of the value of £25, has been forwarded as a present for the Empress of the French, by Shekh Ghoolam Russool, merchant of Ahmedabad. The collection of Poona figures is very good, affording the most striking representations of the different descriptions of people to be met with in the Deccan. The ornaments in silver and horn are also perfect, as indeed is every article collected for the Exhibition.

On this, as on the former occasion, the East India Company has taken great pains and gone to considerable expense, in order that the extensive empire and various possessions over which they exercise sway, should be properly represented in its natural and artifical products. Their official minute accompanying valuable documents, drawn by Dr. Royle, and sent out early in the year, are too long to appear in connection with these remarks, but may find a place in the Society's Journal hereafter.

The *Malta Times* thus speaks of the contribution from that island :—

"We are all aware that these possessions can do but little on such an occasion as the forthcoming world's fair, particularly when our productions are placed in juxtaposition with those of the mother country and the Continent; yet in justice to the Maltese, there are some few articles in which our people may be said greatly to excel, and in these we would wish to see our island fully represented. We particularly allude to gold and silver filigree, silk mittens, and lace, and though last not least, ornamental sculpture in our beautiful free stone. On the list before us, we notice with pleasure a proposal to exhibit specimens of *Bombyx Cynthia* silk lace, mittens, &c., articles, which in our opinion will be sure to attract the attention of the curious, and of those who take an interest in the introduction of this novel species of silk from the East Indies into Europe. Upon the advantages derivable from Exhibitions in general, it is superfluous to expatiate. Let us only hope that our island may obtain a fair share of the prizes that will be bestowed at next year's great show, and that its trade may long hereafter reap the benefits which are certain to accrue therefrom."

Besides the articles mentioned above, silk flowers, wax figures, marble mosaic, raw silk, astronomical instruments, and oil paintings, are in the list.

From the *Sydney Herald* we glean some information as to the contributions to be expected from New South Wales. Mr. M'Arthur, of Goorumburra, Warwick, has signified his intention of contributing some specimens of a tree which is extensively used by the aborigines in that colony for stupifying fish. The process consists in placing portions of the wood in a water hole, and allowing it to remain immersed for a period of twelve hours. At the expiration of this time, the water becomes so impregnated with the narcotic properties of the wood, that the fish either die, or merge into such a state of stupefaction, that they can be taken out of the water without the slightest effort at resistance. What is perhaps still more remarkable, the narcotic principle has no deleterious effect on the nutritiousness of the fish for the purpose of human food. The same gentleman has also promised to furnish some native specimens of pine bark, with resin attached, together with a collection of native weapons peculiar to the district, accompanied by an account of the mode of using them. Mr. Calvert, the companion of Dr. Leichardt in the overland expedition to Port Essington, has also presented the Commissioners with a kind of girdle made of aboriginal female hair by the natives in the vicinity of the Gulf of Carpentaria. In addition to this, the same gentleman presents a small quantity of the seed of the nelumbo, or gigantic Egyptian lotus, a native of the same district. Mr. R. J. Want has likewise kindly intimated his intention of contributing a cabinet containing 60 different varieties of New South Wales gold. Mr. Patten, of the marble works, Pitt-street, has promised to contribute a collection of native marbles of great interest and beauty. Mr. R. N. Russell has presented a working model of a steam boiling-down machine, the construction of which has cost him something like £100. It is a very ingenious and useful invention, and is now extensively used in the pastoral and other districts of the colony. As an addition to the ordinary mechanical appliances it reflects the highest credit on Mr. Russell, to whom, we believe, the invention is entirely attributable. Mr. Childe, of East Maitland, we are informed, is preparing a supply of the Cochineal insect, which, with several specimens of the plant favouring the production of the insect, he intends to present to the Commissioners at an early opportunity. Mr. Shoebert, of Wollongong, has also promised to send a block of Albert coal weighing two or three hundred pounds. The sample is from a new seam, and as it belongs to a peculiar coal formation, it will no doubt possess considerable interest. The Rev. Mr. Wilton, of Newcastle, has also promised specimens of coal, accompanied by interesting fossils of the coal formation. Mr. Saul Samuel, of Bathurst, has also engaged to forward some fine samples of roofing slate, copper, iron, lead, and other mineral ores, found on his property, which, as indications of our natural wealth, will no doubt be highly interesting. At a recent meeting of the Board, Mr. Moore, of the Botanic Gardens, presented samples of two most delicious jams, which he had obtained from the native lime and the leaves of the rosella. The Board expressed themselves highly delighted with the specimens, and at once requested Mr. Moore (by resolution) to furnish them with 6 lbs. of the two jams, for the purpose of Exhibition. Among the gold specimens is a very beautiful nugget, weighing 17¼ ounces, recently procured from Adelong Creek.

In Victoria, £50 had been placed at the disposal of Dr. Mueller, the government botanist, for vegetable specimens, and a similar sum to Mr. Selwyne, government geologist, for mineral specimens. Both gentlemen were absent from Melbourne, engaged in collecting specimens. The local committee at Ballarat are making a model of that gold-field in plaster. Several handsome nuggets and gold specimens had been purchased by the commissioners for transmission with other things to Paris.

From Van Diemen's Land the following are to be forwarded:—

Gold.—Leaf, gilding, jewellery, &c., in Tasmanian gold.

Furniture and cabinet work which may best display the beauty and adaptation of the ornamental woods of the colony. Inlaid work, ditto. Picture frames, ditto. Turnery, ditto. Models in wood, &c., of public buildings bridges, &c.

Swansdown.—At least two skins, to be pure white, and perfectly freed from fatty matter.

Leather.—Varieties of ; grained and enamelled, &c., two hides or skins of each sort.

Printing.

Furs of skins of native animals, thoroughly tanned and dressed ; at least two skins. Ditto, made up into cloaks, rugs, &c.

Talbotypes and daguerreotyes, representing public buildings and remarkable scenery, or rare objects in natural history.

Collection of objects in natural history.—Tasmanian minerals, plants, seaweeds, shells, insects, birds, animals.

Ladies' work.

Coal, anthracite, bituminous, 2 cwt. of each; quartz-sand, for glass making, 2 cwt.; Cayenne, 10 lbs.; canary seed, 6 lbs.; caraway seed, 6 lbs.; coriander seed, 6 lbs.; coffee, 12 lbs.; liquorice, 12 lbs.; mustard, 6 lbs.; rye, 2 bushels; groats, 7 lbs.; starch, 28 lbs.; snuff, 3 lbs.; vinegar, 1½ gallons; gum, wattle, 10 lbs.; manna, 10 lbs.; olive oil, 2 lbs.; wattle bark, 1 cwt.; prepared horse hair, 10lbs.; sperm candles, small box; tallow ditto, ditto; tallow, cask; preserved meats, in cannisters, 1 quart each; glue, 7 lbs.: goldbeater's skins, 12; brushes, in sets; combs, ditto; soap, box.

The committee do not pledge themselves to give premiums for even the best articles exhibited, unless they are of superior merit, and they will be prepared to issue extra medals in specially meritorious cases not specified in the first of the two preceding lists.

Three varieties of wheat will be exhibited by R. Dry, Esq., of Quamby. Mr. D. Gibson, of Pleasant Bank, will also exhibit wheat. Mr. Grant, of Tullochgorum, will contribute wools, wheat, and gold, the produce of his estate. Dr. Crooke will send a writing desk made of the fancy woods of the colony. Dr. Milligan was authorised to communicate with the Colonial Secretary, with a view to obtain two of the largest sections of timber (blue gum) which the island can produce. Sub-committees were appointed to procure ornamental articles of furniture, and a model whale-boat of figured Huon pine, fully equipped. Captain Hawkins furnished a sketch of a structure on the principal of the Trophy of Canadian timber, exhibited in London in 1851, calculated to exhibit the valuable house and ship-building timbers of Tasmania to advantage.

The Cape Colony.—For the purpose of maintaining the character and credit of South Africa as an importing country, and as a field for future enterprise, both in a commercial and agricultural point of view, an exhibition of such articles as may best represent the resources of the colony, and the skill and industry of its inhabitants at Paris, was to be held at Cape Town, on the 29th of December. The following is the published official list of articles entitled to a place in the Cape Town Exhibition:

Wool in bales of 100 lbs.; cotton in ditto; Silk, 1 lb.; karosses, prepared skins of wild and domestic animals—seal skins, goat and sheep skins, one dozen of each; hides, dry and salted; ores and minerals of all sorts; specimens of coal, marble, lime stone, granites, clays (for pottery and other purposes), earths, &c.; Ostrich feathers, not less than 1 lb.; wheat, 1 muid; flour, 1 barrel; colonial wines, 6 bottles; colonial spirits, do.; dried fruits of all sorts, in boxes of 25 lbs. each; Cape preserves of all sorts, not less than 5 lbs. each, in glass bottles; fruits in brandy, not less than 2 bottles of each sort; Boschjes sirop (made from the flower of the Proter bush); Caffre corn, 1 muid; melies or maize, 1 muid; oil seeds, 10lbs. of each variety; tobacco in leaf, 20lbs.; ditto, manufactured in cigars or otherwise, 5lbs.; berry wax, 20lbs; coffee, 5lbs.; sugar, 25lbs.; ginger, 10lbs.; turmeric, 5lbs.; bees' wax, 10lbs.; honey, 6 bottles; aloes, 50lbs.; gums, 25lbs. of each sort; samples of Bhoku leaves; snake root, and other medical plants and preparations; samples of Orchilla weed, plants, roots, &c., used for dyeing purposes, accompanied by specimens exhibiting the effect of such materials; argol (white and red), 25lbs.; indigo, 5lbs.; castor oil, six bottles; barks for tanning, 20lbs. of each; barilla or kelp; ganna ashes, or other ashes and alkalies, used in the manufacture of soap, or for other purposes; guano, 25lbs.; collection of colonial woods, in the rough and polished, each specimen of wood not to exceed 50lbs. in weight; fancy woods, manufactured into portable furniture, for use or ornament; sea elephant oil; seal oil; whale oil—one gallon of each in glass bottles; prepared sheep tail fat, 6 bottles; tallow, 100 lbs.; soap, 100lbs.; a pair of sea cow teeth; elephant's tusks, in pairs or single specimens; ox horns, polished, one pair; whalebone, 100lbs.; biltong (dried meat) 5lbs. of each sort; salted beef, one tierce; salted pork, 1 barrel; specimens of Caffre and Bushman's implements and curiosities.

I must now bring these desultory remarks to a close, merely observing that from the notes of preparation and the details I have already given of what has been done, and what is doing, I feel satisfied that India and the British Colonies will be properly and most creditably represented at Paris in 1855.

I have the honour to be, sir,
Your obedient servant,
P. L. SIMMONDS.

5 Barge-yard, City, Dec. 30, 1854.

THE BANK-NOTE QUESTION.

SIR,—I am induced to trouble you with a few remarks on the important matter of bank-notes, &c.; and as the writers of the papers on this subject which appeared in the *Journal* last week seem to have taken up the question in a somewhat too exclusive—or perhaps I should say professional—manner, arising I imagine from their official connection with public establishments, one or two statements then made call for a word of comment. Great stress was laid upon the identity of water mark, identity of printing, and the importance of uniformity of appearance; it was also stated that no forged note has escaped eventual detection, and that bank-notes are as little, or less liable to be falsified than most other human inventions. Allowing the correctness of these statements, does not the question immediately and naturally arise,—why, then, is the Bank of England about to introduce notes of a new design, which must inevitably lead to the absence of that very uniformity of appearance, the advantages of which were so much insisted on. There will be Old Style and New Style; and the public having, to a great extent, become acquainted with the characteristics of the old notes, are now required to study the peculiarities of the new notes. Will the old notes be called in;—will they cease to be legal tender;—or will both kinds be current at the same time? As a mere matter of economy, notes retaining their present appearance could have been printed from surface, but there was no necessity, I apprehend, to alter the style of printing and the water-mark, if the present notes are not liable to forgeries, and when such occur they never escape eventual detection.

A sort of *sauve qui peut* notion seems to be entertained in many quarters, that if by the unlimited means of manipulation which the Bank of England and similarly situated establishments have at their command, they can effectually protect themselves from fraud,—everything has been done that is necessary. I do not think that the Society of Arts should rest contented with this one aspect of the question, for the following reasons, amongst many others which might be adduced:—

If the case of an individual merchant be taken, it will be found almost universally that the proportion of his transactions managed by means of bank-notes is exceedingly small, and, therefore, the genuineness of his bank-notes is not more important—scarcely of so much consequence—as the genuineness of the other documents by which his business is conducted.

Extend this view to the combined operations of all the merchants and bankers in London, and it will be apparent on the slightest consideration that in each day is included transactions to a vast amount represented by cheques, bills, drafts, warrants, from hundreds of sources, which are entirely unaffected by the security or forgery of a bank-note. If we endeavour to connect with the foregoing the internal and foreign commercial transactions of all England, the isolated question of the genuineness of a bank-note will shrink into comparative insignificance.

Although the plans adopted by the Bank of England are very good in themselves, the special means for the prevention and detection of forgery, which suffice in the peculiarity of its position, can seldom be supplied by other establishments. The Company of the Bank of England may be regarded in three aspects:—as agents for the government keeping the accounts of the national debt, and paying the dividends, for which duty a fixed sum is paid yearly by the government;—as bankers receiving deposits, discounting bills, &c., thus being a competitor with the private and joint-stock banks, and in this department being equally with them interested in the question of security of cheques;—as issuers of the only paper-money which is legal tender in England.

The Bank of England has now secured to itself the issue of nearly all the paper-money current in England, no new banks of issue being allowed, and as the existing ones become extinct they are not replaced, and the number is gradually lessening. The judicious policy of this legislative measure is unquestionable.

The extensive nature of its operations requires for the regularity of their performance adequately huge arrangements for the supply of its documents, and to secure due control, it remunerates one firm so satisfactorily that it is stated the supply of bank-note paper has emanated from the same source for 150 years, and is no doubt regarded as a choice entail or heir-loom. With the exception of the manufacture of the paper, every subsequent operation is conducted on the premises of the Bank.

The immense number of each description of document issued by the Bank of England, and the never-ending variety which go to make up the aggregate of commercial documents, preclude the two from being classed together, and, hence, if anything is to be done for the protection of the latter papers, it must be effected on general principles, applicable, with modifications, to all cases.

The Society would not be rendering an unimportant service to commerce if it were to collect information and specimens of every mode by which documents can be imitated or altered, and test every proffered scheme of protection, ascertaining the precise evil against which the stated security is effective.

Additional importance is given to the subject by the consideration that we are much interested in the public debts, railways, mines, public works, &c., of many foreign countries, and that our securities consist of paper documents.

Moreover, England in this, as in many other respects, is the workshop of the world, inasmuch as Norway, Spain, Greece, Switzerland, the Cape of Good Hope, India, Australia, South America, Canada, and the United States, are more or less provided with bank-notes, cheques, railway and similar documents by this country.

Having thrown out the foregoing hints on the general question, I will append a few notes on some of the curiosities of the subject, which are numerous. The following extracts might be greatly extended with ease.

One bank entirely disregards the advantage of uncut or natural edges, and has its paper prepared in large sheets, with many notes on a sheet; neither have the notes any counterpart.

Another bank pays excessive regard to counterparts, every note being a separate sheet, with counterfoils at each end.

The documents issued by another large foreign establishment have *three* counterparts, but as to save trouble to the officials the documents are severed from all the counterparts before they leave the printer, the security from this source is rather questionable.

In some of the South American States, so great is the issue of paper-money, that the government note is worth less than one-tenth of its theoretical value. It would appear that as the cash value of these paper-moneys decreases the issue is extended, and so, I presume, it will go on until the cost of paper and printing will equal the sum which can be obtained for the finished document, and then a general repudiation of all old notes, and a re-issue will be the only course left.

Instances could be given of an improved style of document tending to raise the shares of the company adopting the improvement.

A few words in an Act of Parliament sometimes causes great changes. After expending a large sum in erecting the beautiful and ingenious machinery devised by the late Mr. Cowper for printing one-pound notes, and working off some millions, the whole was rendered nugatory by the legislature decreeing the non-issue of the notes.

Not very long since a shopkeeper advertised a £5 note and a dress for a few shillings. The bankers issuing the note had failed, and there being no assets, their paper suddenly decreased in value from pounds to pence.

A correspondent of one of the daily papers informed us two or three years ago that the revolutionary party in Italy issued paper-money redeemable in happier times, and that the paper so issued was more readily accepted by the peasantry than the paper of the Italian governments.

Pitt found that money is one of the most important sinews of war; Kossuth the same,—and we are informed that he carried with him his bank-note apparatus until the last moment.

While on this subject I may mention a practice which now strikes one as very curious, but which old colonists of New South Wales will recollect was adopted by the government, to retain dollars in the colony, viz., to stamp a piece out of the centre, thus rendering the coin useless in any other country. The central portion was tender for a quarter-dollar, or 1s. 1d.; and the ring pieces, called ring-dollars, were valued at 3s. 3d., the whole dollar being worth 4s. 4d.

What a change a few years have brought about in this respect!

Hoping some of these scattered fragments may possess a degree of interest, I remain, yours,

WAIMA.

Proceedings of Institutions.

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YARMOUTH.—The Young Man's Institute, by the energy and exertion of its members, has become possessed of the eligible and commodious building situate on Yarmouth Quay, known as the Commercial Club House and Corn Exchange, a building admirably adapted for the purposes of the Institution. The purchase having been completed on the tenth anniversary, the members determined to celebrate that event by a dinner in their newly-acquired hall, which took place on Thursday, the 21st ult., and excited no inconsiderable interest in the town, from the fact that it was to be patronized by the Mayor (Charles John Palmer, Esq.) and other influential gentlemen. The hall presented on entering a very imposing appearance; at the head, or east end, English, French, and Turkish flags and banners were tastefully disposed, forming military and naval trophies; and on either side the emblazoned armorial bearings and trophies of Wellington, Nelson, and others were arranged. Contrasting with these adornments of warfare, at the entrance or lower end of the Hall was an elegant green and gold banner, inscribed with "Prosperity to the Institute," surrounded with handsome paintings, banners, and shields, emblematical of "Science," "Literature," and "Art." The usual loyal and customary toasts were drunk with enthusiasm. The Mayor, in replying to one of the toasts, said, it would have given him very great pleasure to have attended that meeting merely as a member of the society, or simply as an inhabitant; but it gave him far greater pleasure to be present, filling, as he had the honour to do, the high position of chief magistrate of the town, and he was perfectly willing to give the sanction of his presence to their proceedings. He was afraid he could not claim any credit for corporations or town councils in regard to promoting institutions of a similar kind to their own; but he believed bette times were coming over them. He congratulated them upon the celebration of their tenth anniversary, and also upon the fact of having a building of their own. In such an institution, it was necessary that a good understanding should be arrived at in reference to their management; for based as it was upon liberality of principle and sentiment, it was impossible to avoid difference of opinion; and therefore, whoever took the management must exercise great discretion. Mr. W. Johnson, in proposing the health of the president, Sir E. H. K. Lacon, Bart., M.P., said, however excellent such an institution might be, it would be of but little avail without a good and influential head, and in the person of the excellent baronet they had a most suitable selection. He very kindly consented to lend a fostering hand, and the Institution, which then numbered from 80 to 100 individuals, had during his presidency increased to 300. In responding, Sir E. Lacon thanked the company for the enthusiastic manner in which his name had been received. He concluded, from the growing number of members, that this Institution would go on prosperously. He trusted that whatever government might be in office they would encourage Institutions of this nature, and he would support any motion brought forward relative to Literary Institutions, or to the circulation amongst them of their proceedings in Parliament. Might they go on successfully, and be spared to celebrate their twentieth anniversary.—Mr. R. Ferrier, jun., proposed "The Vice-Presidents, coupling with it the name of Mr. R. Steward."—In the course of Mr. Steward's reply he passed a high eulogium upon the president for his exertion in connection with this Institution. With reference to a free library he hoped to see the day when it would be effectually carried out by voluntary acts.—Mr. Chamberlain gave "The healths of Dr. Smyth and Mr. James Barber, honorary secretaries."—Both gentlemen acknowledged the toast.

MEETINGS FOR THE ENSUING WEEK.

MON. Actuaries, 7. Mr. E. J. Farren, "On the Improvement of Life Contingency Calculation."
Architects, 8. Mr. W. G. Caldwell, "On the Spire of All Saints' Church, Chesterfield."
Geographical, 8½. 1. "Geographical Notes taken during a Journey in Persia." By Mr. Keith E. Abbott. 2. "Despatch from Dr. Livingston, containing his routes from Lake Ngami through the interior of South Africa to Angola." 3. "Despatch from Colonel Herman, H.M. Consul at Tripoli, stating that the Reports of Dr. Barth's Death still prove Unfounded."
TUES. Syro-Egyptian, 7½. Mr. S. Sharpe, "A further Argument and Explanation of Hieroglyphics."
Civil Engineers, 8. Renewed discussion on Mr. P. W. Barlow's paper, "On some Peculiar Features of the Water-bearing Strata under London."
Med. and Chirurg. 8½.
Zoological, 9.
WED. Literary Fund, 3.
Graphic, 8.
Entomological, 8½.
R. S. of Literature, 8½.
THURS. Antiquaries, 8.
Royal, 8½.
FRI. Astronomical, 8.
Philological, 8.
SAT. Asiatic, 2.
Medical, 8.

PATENT LAW AMENDMENT ACT, 1852.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[*From Gazette, Dec. 29th*, 1854.]

Dated 26th August, 1854.

1875. R. A. Brooman, 166, Fleet-street—Motive power. (A communication.)

Dated 19th October, 1854.

2236. S. Mason and W. Beeby, Northampton—Boots and shoes.

Dated 13th December, 1854.

2615. Jos. Mayer, Longport, and J. D. Kind, Birmingham—Door knobs and spindles.
2616. C. F. Stansbury, 17, Cornhill—Machine for cutting keys. (A communication.)
2618. A. E. L. Bellford, 16, Castle-street, Holborn—Sewing machines. (A communication.)
2619. P. A. le Comte de Fontaine Moreau, 4, South-street, Finsbury—Inkstand. (A communication.)
2620. P. A. le Comte de Fontaine Moreau, 4, South-street, Finsbury—Photography. (A communication.)
2621. J. L. Jullion, Tovil—Separating fibres.
2622. Lieut.-Col. W. Grant, Bath—Prevention of smoke in domestic fire-places.
2623. H. Berdan, New York—Compressible life-boat.
2624. S. Fisher, Birmingham—Ordnance.
2625. C. J. Taylor, Handsworth—Underground telegraph wires.
2626. T. F. Evans, Philpot-lane—Candles. (A communication.)
2627. T. Haines, Melbourne, near Derby—Warp machinery.
2628. W. C. Taylor, Greenwich—Bearing parts of shafts and axles.
2629. J. Court, jun., Sheerness—Rockets.

Dated 14th December, 1854.

2630. J. Redgate, Sneinton, J. Thornton, Nottingham, and E. Ellis, Sneinton—Lace machinery.
2631. R. Ruston, Birmingham—Anchors.
2632. L. W. Evans and J. Mc Bryde, St. Helen's—Sulphuric acid.
2633. W. F. Padwick, Hayling Island, Hants—Projectiles.
2635. W. C. Scott, Warner-road, Camberwell—Paddle-wheels.
2636. P. E. Henderson, 4, Trafalgar-square—Ventilating ships.
2637. L. Cornides, 4, Trafalgar-square—Covering glass with collodion.
2638. J. Rose, Ashford—Fire-boxes of steam-boilers.

Dated 15th December, 1854.

2639. J. Rowley, Camberwell—Embossing woven or felted fibrous materials.
2640. W. Clark, Islington—Anchors.
2641. U. Scott, Duke-street, Adelphi—Metallic bodies.
2642. A. Lyon, Windmill-street, Finsbury—Mincing machines.
2643. L. Turner, Leicester—Weaving elastic fabrics.
2644. F. Archer, Bishopsgate-street, and W. Papineau, Stratford—Distilling peaty and other matters.
2645. R. Adams, King William-street—Revolvers.
2646. E. Strong, Carstairs, N.B.—Removing and replacing railway wheels and axles.

Dated 16th December, 1854.

2648. L. J. Livsey and W. Weild, Manchester—Projectiles and ordnance.
2650. J. Hickman and J. Smith, Birmingham—Stop-cock.
2652. Lieut. M. C. Friend, R.N., Greenwich, and W. Browning, 111, Minories—Determining magnetic aberrations occasioned by local attraction.
2654. W. Eassie, Gloucester—Retarding vehicles on railways.
2658. L. Wimmer, Vienna—Baking.

Dated 18th December, 1854.

2660. C. F. Stansbury, 17, Cornhill—Life-buoy. (A communication.)
2662. W. Hartley, Bury—Safety valves.
2664. E. Whele, Birmingham—Lamps.
2666. L. H. F. Melseus, Brussels—Saponification.
2668. J. H. Johnson, 47, Lincoln's-inn-fields—Extracting tannic acid from leather. (A communication.)

INVENTION WITH COMPLETE SPECIFICATION FILED.

2683. W. Donald and W. Heginbotham, Carlisle—Looms. 20th Dec., 1854.

WEEKLY LIST OF PATENTS SEALED.

Sealed 29th December, 1854.

3. Alfred Dawson, 14, Barnes-place, Mile-end-road—Converting small coal or coal dust, or small coal and coke, into solid blocks of fuel.
1431. Edward Joseph Hughes, Manchester—Improvements in sewin machines.
1462. Jean André Cécile Nestor Delpech, Castres—Improved lift and force pump, called 'castraise-pump.'
1464. Joseph Marie Bardet, and François Collette—Improvement in the construction of matches.
1468. Henry Heycock, Manchester—Improvements in hydraulic presses, employed for packing or pressing cotton, silk, flax, wool, or other fibrous materials.
1469. David Bowlas, Reddish—Improvements in machinery or apparatus for knitting or manufacturing healds or harness used in looms for weaving.
1472. Louis Joseph Cheval, Raismes, France—Improvements in beer engines.
1479. Samuel Harvard and Joshua Womersley, Stoke Holy-cross—Heating crushed seed for making cake, for drying seeds, corn, and other grain, and for feeding mill stones or other grinding apparatus.
1526. John Knowelden, 7, Church-road, Battersea—Improvements in steam-boiler and other furnaces.
1620. Edward Francis Hutchins, 263, Whitechapel-road—Constructing the cylinders of engines worked by steam, air, or other fluid body, in a circular form on plan, by which means more power is obtained from a given quantity of the said fluid body in cases where a circular motion is required than by any other known form of cylinder.
1632. Peter Spence, Pendleton—Improvements in obtaining sulphur from iron pyrites and other substances containing sulphur, and in apparatus for effecting the same.
1707. William Gossage, Widnes—Improvements in the manufacture of certain kinds of soap and other detergent compounds.
1762. William Woodcock, Earl's-court Brewery, Brompton—Improvement in the combustion of fuel.
1846. James Lamb Hancock, Milford Haven, Pembrokeshire—Improved pneumatic safety inkstand.
1922. Thomas Craddock, Portway Foundry, Potters-lane, Wednesbury—Improvements in the steam-engine.
1959. Samuel Frearson, Glascote, Warwick—Improvements in the construction and manufacture of buttons, a part or parts of which improvements may also be applied to other similar purposes.
2035. Auguste Edouard Loradoux Bellford, 16, Castle-street, Holborn—Improvements in sewing machines.
2080. Frederick Clark, King street, Westminster—Improved spindle and bush for door knobs and other similar uses.
2095. John Nelson Gamewell, Camden, South Carolina, U. S.—Improvements in instruments for relieving the wires of the electric telegraph of atmospheric electricity.
2167. Joseph Burdekin Jackson, Etna Works, Sheffield, and William Bowler, Sheffield—Improvements in furnaces or fire-places, and in the prevention of smoke.
2206. William John Bisseker, Birmingham—Improved and durable method of labelling bottles and such like vessels or articles as require or may require labeling.
2258. John Penn, Greenwich—Improvements in the manufacture of the pistons, slide valves, and stuffing boxes of steam engines.
2308. Robert Stirling Newall, Gateshead—Improvements in electric telegraphs.
2323. Alfred Vincent Newton, 66, Chancery lane—Improved method of forging or swaging railroad carriage and other wheels.
2368. William Edward Newton, 66, Chancery-lane—Improved mode of constructing saws.

Sealed January 2nd, 1855.

1449. Benjamin Walters, Wolverhampton—Improvements in spindles for locks and latches, and in the means of adjusting knobs to the same to suit any thickness of door.
1456. Urbain Chauveau and Charles d'Epinois, Paris—Improved means or apparatus for preventing collisions on railways.
1501. Thomas Waller, Ratcliff—Improvements in the construction of stoves and other fire-places.
1507. Thomas Schofield Whitworth, Salford—Improvements in machinery or apparatus for cutting or shaping wood, parts of which are particularly applicable in the construction of spinning machinery.
1516. Matthias Walker, Horsham—Improved construction of cooking stove.
2021. John Cunningham, Beith, N.B.—Improvements in the preparation or production of printing surfaces.

WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Date of Registration.	No. in the Register.	Title.	Proprietors' Names.	Address
Dec. 28.	3673	Russell's Self-Ventilating Air Tube Coach Roof Lamp	William Russell	23 & 24, Blackwellgate, Darlington, Durham.
1855. Jan. 1.	3674	Empress Boot Leg	J. Westwood Astles	64, Foregate-street, Worcester.